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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,223	01/26/2004	Adlai Smith	38203-6081B	1730

7590 03/17/2006

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EXAMINER
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YOUNG, CHRISTOPHER G

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/765,223	<b>Applicant(s)</b> SMITH ET AL.	
	<b>Examiner</b> Christopher G. Young	<b>Art Unit</b> 1756	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.138(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-41 is/are pending in the application.
- 4a) Of the above claim(s) 28 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 30-41 in the reply filed on January 10, 2006 is acknowledged.

### ***Information Disclosure Statement***

2. The Examiner makes note of the references cited in the parent application, Application Serial Number 10/020,569. However, if Applicant wants these references to be considered formally, and made of record, in the instant application they should be submitted in an Information Disclosure Statement.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai, US Patent Number 6,737,207.

The instant application (elected invention) is drawn to a method of using a reference wafer comprising: loading the reference wafer, that includes overlay targets,

onto an imaging machine; loading and aligning an overlay reticle onto the imaging machine; exposing the reference wafer with the overlay reticle; developing the reference wafer; measuring the overlay targets; subtracting offset values, associated with the wafer, from the measurements; and calculating errors of the machine. The prior art reference teaches a method for evaluating lithography systems and methods for adjusting the substrate processing machines.

When the ordinary exposure is performed, a wafer, to which a photoresist is applied by a resist coater, is transported onto a wafer stage of a projection exposure apparatus to perform the exposure, followed by development by a developing apparatus. When the characteristic is evaluated, respective shot areas on the wafer applied with the photoresist are exposed with an image of a predetermined evaluating mark in a narrow area in an effective field of a projection optical system of the projection exposure apparatus. The characteristic of the resist coater or the developing apparatus is evaluated by detecting a state of a resist pattern after the development. When the image formation characteristic of the projection exposure apparatus is evaluated, the wafer is exposed with images of a plurality of predetermined evaluating marks in a wide area in the effective field. The respective characteristics of the resist coater, the exposure apparatus, and the developing apparatus for constructing a lithography system can be evaluated respectively independently.

These teachings provide the framework of the instant application as currently claimed. However, the particular step of subtracting offset values associated with the wafer is not discussed. Additionally, some of the particular machines utilized for

imaging in the dependent claims are not particularly disclosed in the prior art reference. Although the prior art is silent with respect to these particular limitations, one of ordinary skill in the art would still have found the invention prima facie obvious in view of the Imai patent since the teachings specifically say that the system can be evaluated independently. Known errors prior to imaging would necessarily be deducted from any error measurements taken to assure that the machines are adjusted properly, and not over or under adjusted. Furthermore, the specific imaging source would not affect the ability of a skilled artisan to apply the teachings of Imai. The method of evaluating the lithography system as taught by the patent would work as well for any imaging source, absent objective evidence to the contrary.

In view of this, the scope of claims 30-41 is prima facie obvious.

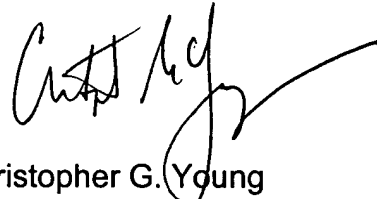
### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher G. Young whose telephone number is 571-272-1394. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1756

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Chris G. Young', with a long horizontal flourish extending to the right.

Christopher G. Young  
Primary Examiner  
Art Unit 1756

cgy